CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 01-041
WASTE DISCHARGE REQUIREMENTS AND
RECISION OF RESOLUTION 58-278 AND
CLEANUP AND ABATMENT ORDER 94-134:

SUNQUEST PROPERTIES, INC., OYSTER POINT PROPERTIES, INC., TUNTEX (USA), INC., SUNSET PROPERTIES, INC., SANITARY FILL COMPANY, SUNSET SCAVENGER COMPANY, MACOR, INC., THE CITY OF BRISBANE, BRISBANE PROPERTIES, LLC, DOUGLAS H. AND DIANE A. GALTEN, VAN ARSDALE-HARRIS LUMBER CO., ROBERT E. AND DOROTHY D. FEWER, AND, BRUCE R. AND KURT PAPENHAUSE

BRISBANE CLASS III LANDFILL
BRISBANE, SAN MATEO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board), finds that:

SITE OWNER AND LOCATION

1. Sunquest Properties, Inc., Oyster Point Properties, Inc., Tuntex (USA), Inc., Sunset Properties, Inc., Sanitary Fill Company, Sunset Scavenger Company, Macor, Inc., The City of Brisbane, Brisbane Properties, LLC, Douglas H. and Diane A. Galten, Van Arsdale-Harris Lumber Co., Robert E. and Dorothy D. Fewer, and, Bruce R. and Kurt Papenhause, hereinafter referred to as the Dischargers, currently own the Brisbane Landfill.

2. Potential refuse underlying approximately 4.55 and 0.26 acres of land located along the southeastern and northwestern portions of the site **(Figure - 3)** has not been delineated. The California Department of Transportation has been potentially identified as owning the southeastern (4.55 acres) easement while the City of San Francisco potentially owns the lot located along the northwestern terminus of the site (0.26 acres). Upon confirmation of the existence of waste debris, the owners of these properties shall comply with all of the provisions, specifications, and prohibitions of this Order.

3. The site encompasses an area of approximately 364 acres and is located in the City of Brisbane, as shown on **Figure 1**. The site is bounded on the east by U.S. Highway 101, on the west by the Caltrain/Joint Powers Board railroad tracks, and the south by the Guadalupe Lagoon. The northern edge of the site lies approximately midway between a row of properties located directly north of Beatty Avenue. Tunnel Avenue bisects the

western portion of the site. **Figure 2** illustrates the location of the site and the proximity of the adjacent properties.

PURPOSE OF ORDER UPDATE

4. The primary purposes of this order are to bring the landfill into compliance with the appropriate portions of Title 27 of the California Code of Regulations (formerly known as Chapter 15, Title 23), referred to hereinafter as Title 27 and to establish a discharge monitoring program for the site.

SITE DESCRIPTION

5. The Brisbane Landfill is a closed, unlined Class III landfill. The landfill operated between 1932 and 1967, and was used for the disposal of primarily non-hazardous solid wastes composed principally of domestic, industrial, and shipyard waste, sewage, and rubble. No waste has been disposed of at the site since 1967. Prior to 1932, the area now occupied by the Brisbane Landfill consisted of a low-lying tidal marshland. Consistent with landfill practices at that time, no liner was installed at the site. Instead, the waste materials were placed directly into the water on top of a compressible silty clay unit (i.e., the Young Bay Mud).

6. Southern Pacific Transportation Company (SPTC) purchased the site in 1896 and by 1914 had filled and constructed a railroad along the western perimeter of the present day fill. In 1932, Sanitary Fill Company leased the property from SPTC and by the mid 1930s had subcontracted the day-to-day filling operations to the Easly and Brassy Company. Following the completion of land filling activities in 1967, Easly and Brassy ceased to operate at the landfill.

7. Upon completion of filling operations in each of the three disposal areas, the Brisbane Landfill was subdivided into multiple parcels currently owned by the Dischargers named above. Sunquest Properties, Inc., Oyster Point Properties, Inc., and Tuntex (USA), Inc., purchased the largest portion of the landfill from SPTC in 1989 and currently lease the corresponding land to Ryan Engineering, Inc., and Brisbane Recycling Co., Inc., for use as a stockpile yard for clean soil and crushed rock. The other identified Dischargers: Sunset Properties, Inc., Sanitary Fill Company, Sunset Scavenger Company, Macor, Inc., The City of Brisbane, Brisbane Properties, LLC, Douglas H. and Diane A. Galten, Van Arsdale-Harris Lumber Co., Robert E. and Dorothy D. Fewer, and, Bruce R. and Kurt Papenhause, are named due to the ownership of parcels on which the landfill exists. **Figure 3** shows the location and Assessors Parcel Numbers for the properties located on the landfill. **Table 1** includes ownership information for the parcels identified on **Figure 3**.

8. Current uses of the site include but are not limited to the following: lumberyards, office space, warehouses, stockyards, parking lots, vehicle repair facilities, a solid and a hazardous waste transfer station, a recycling facility, and an aboveground petroleum storage tank farm.

REGULATORY HISTORY

9. In 1958, the Regional Board adopted Resolution 58-278. The Resolution prohibited the discharge of waste directly to surface water and set criteria for sulfide, dissolved oxygen, and pH. The resolution called for the elimination of odors, unsightly floating or suspended solids, prevention of adverse effects on sport fishing, pleasure boating, and/or navigation at all points easterly of the James Lick Freeway (Highway 101), and called for the elimination of unsightly discoloration and adverse effects on fish and/or water fowl propagation in the waters of the State. The Resolution also required that a monitoring program be established and that periodic reports be submitted to the Board for review. This Order rescinds Resolution 58-278.

10. In 1992, a Solid Waste Water Quality Assessment Test (SWAT) was prepared for the Brisbane Landfill as required by Section 13273 of the California Water Code. The purpose of this statutory requirement was to rank all solid waste disposal sites in California by their potential adverse effects on water quality. The Brisbane Landfill was classified in the sixth rank and was thus required to submit a SWAT report to the RWQCB by July 1, 1992. The report concluded that there is evidence that constituents of concern may be leaving the site, particularly along the eastern and southern perimeters of the landfill, however, materials classified as hazardous did not appear to be present.

11. In 1994, the Board issued Cleanup and Abatement Order (CAO) No. 94-134. The CAO required that Tuntex Properties maintain a two-foot minimum cover of clean soil over the refuse and retain a positive drainage gradient to promote lateral runoff and to prevent ponding. Furthermore, CAO No. 94-134 required that the landfill comply with State Board Order 92-08, which required a Storm Water Pollution Prevention Plan for the site. This Order incorporates and rescinds CAO No. 94-134.

LANDFILL CONSTRUCTION HISTORY

12. The Brisbane Landfill operated and closed before either modern waste disposal practices were developed or formal regulatory designs for closure were required. Waste disposal design features such as liners, segregation of waste into disposal cells, and leachate collection systems were not components at the site. Waste containment was consistent with practices in the industry at that time where waste fill was placed directly on native soils.

13. In 1948, Highway 101 was constructed immediately to the east of the landfill. According to records, the highway was not constructed on refuse material but on constructed fill

derived from the Candlestick Point area. Following the completion of the highway, the Brisbane Landfill was isolated from the direct wave action from the San Francisco Bay.

14. Upon completion of disposal operations in each fill area, a soil cover of unknown hydraulic conductivity and thickness was installed covering the various fill areas. Clean cover materials continue to be added by the current operations of Ryan Engineering and Brisbane Recycling Co., Inc., who stockpile soil that surcharges the refuse on the largest portion of the site.

15. A monitoring well network was installed between 1988 and 1992 on the portion of the landfill owned by Sunquest Properties, Inc. Between 1990 and 1991 an active gas extraction system was installed which consisted of perimeter horizontal headers with vertical extraction wells and horizontal "finger" wells encircling Sunquest's portion of the site.

SITE WASTE DISPOSAL HISTORY

16. The landfill was filled in three areas with refuse composed of primarily non-hazardous solid wastes such as rubble, municipal, and shipyard waste. The total volume of waste disposed of at the landfill is estimated to be 12.5 million cubic yards. Of this volume an estimated 73 percent was produced by residential and commercial activities, with inert fill accounting for approximately 25 percent, and the remaining 2 percent was assumed to be liquid waste.

17. Fill Area I occupies the northwest portion of the site and was used for waste placement from 1932 until 1952. This fill area extended eastward about 1,000 feet into the San Francisco Bay from the area near Southern Pacific's railroad tracks. Fill Area II was used for waste disposal from 1953 to 1959 and extended the landfill an additional 600 feet eastward into the Bay and completed filling of the northern portion of the site. An access road built during the construction of Highway 101 (The Old Bayshore Freeway) defined the landfill's southern boundary and was located slightly north of the present location of the central drainage canal, which currently bisects the site. Fill Area III was created in 1959 when the landfill's southern boundary was extended to the south to its present location by construction of an earth fill dike. This area was used for waste placement from 1959 until the landfill stopped receiving waste in 1967.

SITE GEOLOGIC SETTING

18. The site is a relatively flat to slightly domed, artificial fill area, which overlies alluvium consisting of estuarine deposits referred to as the Young Bay Mud. The Young Bay Mud deposits are found throughout the San Francisco Bay region and generally consist of plastic, silty marine clays with high organic content and can range in thickness of up to approximately 120 feet. The Young Bay Mud typically has localized lenticular deposits

of poorly graded sand, silt, peat beds, and fossiliferous horizons. Beneath the Young Bay Mud, in the site vicinity, lies a group of young sedimentary units deposited in former topographic lows such as the Visitacion and Guadalupe Valley. This alluvium consists of dense silts, clays, and fine- to medium-grained sands, with occasional gravels and is likely representative of alluvial fan deposits which prograded during periods of glaciation that lowered sea level. These deposits can range in thickness up to approximately 50 feet. Underlying the unconsolidated alluvial material is the Old Bay Mud, which is compositionally similar to the Young Bay Bud with the exception that the Old Bay Mud is generally stiff to very stiff and overconsolidated. The Old Bay Mud can range in thickness up to approximately 200 feet, however due to erosion of its surface and/or irregularities on top of the underlying bedrock (Franciscan Complex) the Old Bay Mud can have highly variable stratigraphic thickness. Franciscan Complex bedrock, which underlies the young alluvial deposits near the landfill, is composed of sandstone, shale, conglomerate, chert, greenstone and serpentinite and is approximately Upper Jurassic to Lower Cretaceous in age and can be found to the west and north at ground surface and at depths greater than 250 feet towards the eastern extent of the landfill. All of the aforementioned geologic units are not present throughout the site. This is especially true in the northern portion of the landfill. In some areas, the Young Bay Mud immediately overlies Franciscan bedrock. At other locations in the northern portion of the site landfill materials are in direct contact with Franciscan bedrock.

19. There are four known faults located within 5 miles of the site. These faults include the San Andreas, Sierra, City College, and the Hillside. The San Andreas Fault is an active fault located approximately 5 miles to the southwest of the landfill and would likely represent the most concern for the site. This fault has a maximum expected Richter magnitude of 8.25 and was the source of historic earthquakes including the 1906 San Francisco Earthquake and the 17 October 1989 Loma Prieta Earthquake. The Sierra Fault was active in the Pleistocene (i.e., displacement < 1,800,000 years before present (bp)) and is located approximately 4 miles from the site. The City College and the Hillside Faults are both Pre-Quaternary (i.e., displacement > 1,800,000 years bp) in age. The City College Fault is inferred to transect the northern portion of the landfill while the Hillside Fault is located approximately 1.5 miles away to the southwest.

20. The Hayward and Calvaras Faults are located greater than 5 miles from the site. Both faults are considered active with an expected maximum Richter magnitude of 7.25, which could subsequently have a significant seismological impact on the site. The maximum credible bedrock acceleration from an earthquake on one of these faults would be in excess of 0.5 times the acceleration of gravity, which would be capable of extensive damage to improperly engineered structures.

SITE HYDROGEOLOGIC SETTING

21. The hydrogeologic units in the vicinity of the site include the Franciscan Complex, Old Bay Mud, alluvial fan deposits, Young Bay Mud, and the landfill itself. The landfill is an unconfined, water table, hydrostratigraphic unit. The landfill is located in a discharge area, an area, which is generally characterized by upward groundwater vertical hydraulic gradients. Groundwater above the Young Bay Mud is referred herein as "shallow groundwater" and in alluvial materials between the Young Bay Mud and the Old Bay Mud as "deep groundwater." Groundwater found in bedrock is also considered "deep groundwater."

22. A variable thickness of the Young Bay Mud, where present at the site, acts as a confining layer between the underlying alluvial deposits and Franciscan Complex bedrock and the landfill refuse. Wells, screened in the alluvial deposits below the Young Bay Mud, exhibit higher potentiometric surfaces than wells screened directly in refuse (i.e., vertical upward gradient). Although, one well pair MW-6B/MW-7A exhibits a vertical downward gradient, this well pair is located upgradient of the landfill and northwest of the aboveground petroleum tank farm. In addition well MW-6B is screened in alluvial materials and bedrock, and does not appear to be in close hydraulic connection with other deep wells at the site.

23. The regional upward vertical gradient, owing to recharge under confined conditions, is enhanced in some portions of the site by soil loading. Surcharging of the Young Bay Mud by soil loading can cause locally high pore pressure, which dissipates slowly because of the low hydraulic conductivity of the Young Bay Mud. High pore pressures of the Young Bay Mud would subsequently cause locally higher potentiometric surface of groundwater.

24. Water elevations that increase with depth, generally, are expected in the vicinity of groundwater discharge areas, such as the San Francisco Bay. The thick sequence of the Young Bay Mud and the observed upward vertical groundwater gradient likely act to prevent the downward migration of contaminants at the site.

25. Leachate flow south of the central drainage canal, which bisects the site, is generally towards the south (i.e., towards the Guadalupe Lagoon) or the southeast (i.e., towards the San Francisco Bay). Although leachate flow patterns north of the central drainage canal appear to be more complex, they are generally to the east, towards the San Francisco Bay. Leachate flow patterns in this northern area also exhibit complex mounding in the vicinity of former monitoring wells MW-17A and MW-18A.

26. Leachate hydraulic gradients within the landfill range from 0.0001 to 0.012 ft/ft. Leachate recharge appears to result from direct infiltration of precipitation, upward movement of deep groundwater into the Young Bay Mud and landfill, and from

infiltration from the central drainage canal. Tidal influence is not likely a significant contributor to recharge of leachate in the landfill.

27. Deep groundwater (i.e., below the Young Bay Mud) appears to be less complex than that observed in the overlying Young Bay Mud. Deep groundwater appears to be mounded in the vicinity of MW-35B and generally flows away from the mound towards the north and south during the dry season. Conversely, during the wet season the mound is less apparent and groundwater flows to the southeast towards the Guadalupe Lagoon and the San Francisco Bay. Groundwater gradients in the deeper zone have ranged from between 0.0006 to 0.0027 ft/ft. Recharge to groundwater in the deep zone appears to result from upward movement of groundwater from underlying geologic deposits.

GROUNDWATER CONTAMINATION AND WATER QUALITY

28. Landfill leachate contains dissolved metals, elevated ammonia, volatile organic compounds (VOCs), and semi volatile organic compounds (SVOCs). Landfill leachate is brackish to saline.

29. Shallow groundwater along the perimeter of the landfill indicates the presence of VOCs, SVOCs, metals, and elevated ammonia. The following are the maximum detected concentrations of organic compounds observed during the December 1995 monitoring event: Total petroleum hydrocarbons (TPH) as gasoline at 400 micrograms per liter (µg/L) detected in monitoring well MW-43A; TPH as motor oil at 1,130 µg/L detected in monitoring well MW-2A; TPH as diesel at 3,000 µg/L, TPH as bunker-C oil at 12,000 µg/L, and benzene at 6.2 µg/L detected in monitoring well MW-33A; and, ethyl-benzene, toluene, and total xylenes at 1.8, 3.9, and 10.3 µ/l, respectively, detected in monitoring well MW-10A. Total dissolved solids (TDS) within perimeter monitoring wells indicate that groundwater quality is fresh (i.e., TDS concentration ≤1,000 milligrams per liter (mg/L)) to brackish (i.e., TDS concentration from 1,000 to 20,000 mg/L) along the perimeter of the site. Furthermore, data from perimeter wells potentially indicates that constituents of concern may be leaving the site, particularly along the eastern and southern perimeter.

CURRENT AND FUTURE LAND USES

30. Current land use at the landfill is a mixture of open, industrial, and commercial space. Industrial land use includes stockpiling of soil and rock aggregate, warehouses, stockyards, parking lots, vehicle repair/maintenance facilities, a solid waste transfer station, a household hazardous waste collection facility, a recycling facility, and an aboveground petroleum storage tank facility. Commercial land use includes office space and a lumberyard.

31. Currently Sunquest Properties, Inc., plans to develop the largest portion of the site with a mixture of commercial and light industrial properties.

SITE INVESTIGATIONS

32. In 1977, John V. Lowney & Associates completed a preliminary geotechnical investigation for the landfill. The purpose of the investigation was to assess geotechnical issues associated with the development of the site for commercial and industrial use. The report concluded that development of the site for use as commercial and industrial land use was feasible. The primary concerns identified in the report for construction were to control methane gas, which had been measured at explosive levels within the landfill and to account for differential settlement.

33. In 1990, Kleinfelder, Inc., conducted a geotechnical investigation for the purpose of evaluating foundation requirements for future developments. They also conducted an evaluation of the extent of refuse at the site and installed soil gas and gas pressure probes to provide additional information for design of a landfill gas extraction system. In 1991, following the previous investigations, an active landfill gas extraction system was installed, the main header of which surrounds the 240 acre plot located east of Tunnel Avenue and west of Highway 101.

34. In 1992, Kleinfelder, Inc., conducted a Solid Waste Water Quality Assessment Test (SWAT) investigation to determine if the landfill had an adverse effect on water quality. The report concluded that organic compounds have been detected and have impacted the shallow water-bearing zone (i.e., above the Young Bay Mud). The report also concluded that the Young Bay Mud is an effective barrier and coupled with the observed upward vertical groundwater gradient, should prevent the downward migration of contaminants. Furthermore, the report concluded that the refuse layer of the landfill did not appear to be tidally influenced and that contamination at the site could not be classified as a hazardous waste under California State regulations.

35. In 2000, GeoSyntec Consultants, Inc., on behalf of Sunquest Properties, Inc., performed two investigations to identify property owners and to delineate the footprint of the Brisbane Landfill. Subsurface Consultants, Inc., on behalf of Sunset Properties, Inc., also completed in 2000 a technical review of geologic information to delineate the northern extent of the landfill.

MONITORING PROGRAMS

36. **Groundwater Monitoring** – There are a number of groundwater monitoring wells within the Brisbane Landfill. No formal groundwater-monitoring program exists, however, Provision 7 requires that the Dischargers develop a groundwater Detection

Monitoring Plan and establish an effective Detection Monitoring Program for groundwater monitoring. General groundwater monitoring program requirements are outlined in the Discharge Monitoring Program attached to this Order (Attachment A).

37. **Leachate Monitoring** - The leachate-monitoring program is outlined in the Discharge Monitoring Program attached to this Order (Attachment A). The Dischargers are required to analyze for the monitoring parameters as presented in the Discharge Monitoring Program.

38. **Surface Water Monitoring** – Surface water monitoring will be conducted as part of a General Industrial Storm Water Discharge Permit and through approved Industrial and Construction Storm Water Monitoring Plans.

39. **Vadose Zone Monitoring** – Vadose zone monitoring is not conducted at the site due to the presence of shallow groundwater.

40. **Basin Plan** - The Regional Board adopted a revised Water Quality Plan for the San Francisco Bay Basin (Basin Plan) in June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The State Water Resources Control Board and the Office of the Administrative Law approved the revised Basin Plan on July 20 and November 13, respectively, of 1995. A summary of regulatory provisions is contained in Title 23 of the California Code of Regulations at Section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

41. **Beneficial Uses** - The beneficial uses of the South San Francisco Bay include:

    a. Ocean, Commercial, and Sport Fishing;
    b. Estuarine Habitat;
    c. Industrial Service Supply;
    d. Fish Migration;
    e. Navigation;
    f. Preservation of Rare and Endangered Species;
    g. Water Contact Recreation;
    h. Noncontact Water Recreation;
    i. Shellfish Harvesting; and,
    j. Wildlife Habitat.

The present and potential beneficial uses of the shallow groundwater are as follows:

a. Agricultural Supply;
b. Industrial Service Supply;
c. Municipal and Domestic Supply; and,
d. Industrial Process Supply.

The present and potential beneficial uses of the deeper groundwater are as follows:

a. Agricultural Supply;
b. Freshwater Replenishment;
c. Industrial Service Supply;
d. Municipal and Domestic Supply; and,
e. Industrial Process Supply.

42. Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas containing high TDS (i.e., >3,000 mg/L), high background contaminant levels, or those areas with a low-yield. In general, shallow and deep groundwater underlying the western perimeter of the site qualifies as a potential source of drinking water. Shallow groundwater underlying much of the remainder of the site has historically exhibited TDS in excess of 3,000 mg/L and/or electrical conductivity in excess of 5,000 micro-mhos per centimeter. Presently, there is no current use of the site's groundwater, nor any anticipated plans for its use.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

43. The Regional Board finds that this site is exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to §15308, Title 14 of the California Code of Regulations.

NOTIFICATION AND MEETINGS

44. The Board has notified the Dischargers and interested agencies and persons of its intent to issue waste discharge requirements for the Dischargers and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

45. The Board, in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Dischargers, its agents, successors and assigns shall meet the applicable provisions contained in Title 27, Division 2, Subdivision 1 of the California Code of Regulations and Division 7 of the California Water Code and shall comply with the following:

A. PROHIBITIONS

1. Waste shall not be in contact with ponded water from any source, to the extent that all jurisdictional agency requirements for existing ponded areas are attained.

2. No further waste shall be disposed at this landfill with the exception of properly approved and/or permitted facilities.

3. Leachate from waste and ponded water containing leachate or in contact with solid wastes shall not be discharged to waters of the State or of the United States.

4. Neither the treatment nor the discharge of waste shall create a condition of pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code (CWC) (H & SC Section 5411, CWC Section 13263).

5. The Dischargers, or any future owners of the site, shall not cause the following conditions to exist in waters of the State at any place outside the waste management facility:

   a. Surface Waters

      1. Floating, suspended, or deposited macroscopic particulate matter or foam.

      2. Bottom deposits or aquatic growths.

      3. Alteration of temperature, turbidity, or apparent color beyond natural background levels.

      4. Visible, floating, suspended or deposited oil or other products of petroleum origin.

      5. Toxic or other deleterious substances to be present in concentrations or quantities that may cause deleterious effects on aquatic biota, wildlife or waterfowl, or that render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

   b. Groundwater

      Groundwater shall not be impacted as a result of the waste discharge.

a. SPECIFICATIONS

1. All reports pursuant to this order shall be prepared under the supervision of a California registered civil engineer, California registered geologist or California certified engineering geologist.

2. The site shall be protected from any washout or erosion of wastes or cover material and from inundation that could occur as a result of a 100-year, 24-hour precipitation event, or as the result of flooding with a return frequency of 100 years.

3. Surface drainage from tributary areas and internal site drainage from surface or subsurface sources shall not contact or percolate through wastes during the life of the site.

4. Any containment, drainage, monitoring systems and other environmental control facilities at the landfill, shall be maintained as long as leachate is present and poses a threat to water quality.

5. The Dischargers shall assure that existing and future structures, which control leachate, surface drainage, erosion, and gas, are constructed and/or maintained to withstand conditions generated during the maximum probable earthquake.

6. The final cover system shall be graded and maintained to promote lateral runoff and prevent ponding and infiltration of water.

7. The Dischargers shall analyze the samples from the groundwater wells included in the approved Detection Monitoring Plan (see Provision 7) as outlined in the Discharge Monitoring Program (Attachment A).

8. In the event of a release of a constituent of concern beyond the Point of Compliance (Section 20405, Title 27), the site begins a Compliance Period (Section 20410, Title 27). During the Compliance Period, the Dischargers shall perform an Evaluation Monitoring Program and a Corrective Action Program. The Point of Compliance is defined as the vertical surface located along the outer edge of the waste management unit and extending through the uppermost aquifer underlying the unit.

9. The Dischargers shall install any reasonable additional groundwater and leachate monitoring devices required to fulfill the terms of any future Discharge Monitoring Program issued by the Executive Officer.

10. Landfill gases shall be adequately vented, removed from the landfill, or otherwise controlled to minimize the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water.

11. The Dischargers shall maintain all devices or designed features installed in accordance with this order, such that they continue to operate as intended without interruption as

provided for by the performance standards adopted by the California Integrated Waste Management Board.

12. The Dischargers shall provide a minimum of two surveyed permanent monuments near the landfill from which the location and elevation of wastes, containment structures, and monitoring facilities can be determined throughout the post-closure maintenance period. A California licensed land surveyor or California registered civil engineer shall install these monuments.

13. The Regional Board shall be notified immediately of any failure occurring in the waste management unit. Any failure that threatens the integrity of containment features or the landfill shall be promptly corrected after approval of the method and schedule by the Executive Officer.

14. The Dischargers shall comply with all applicable provisions of Title 27 that are not specifically referred to in this Order.

15. The Dischargers shall maintain the facility so as to prevent a significant reduction in water quality at all points of compliance.

C. PROVISIONS

1. The Dischargers shall comply with all Prohibitions, Specifications and Provisions of this Order. All required submittals must be acceptable to the Executive Officer. The Dischargers must also comply with all conditions of these Waste Discharge Requirements. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board. (CWC Section 13261, 13263, 13265, 13267, 13268, 13300, 13301, 13304, 13340, 13350).

2. All technical and monitoring reports required to be submitted pursuant to this Order are being requested pursuant to Section 13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject the Dischargers to enforcement action pursuant to Section 13268 of the California Water Code.

3. The Dischargers shall submit **Semiannual and Annual Monitoring Reports**, acceptable to the Executive Officer, and in accordance with the attached Discharge Monitoring Program (Attachment A). The annual report shall be due no later than **April 30** of each year and shall cover the previous calendar year as described in Part A of the Discharge Monitoring Program. In addition to the requirements outlined in Attachment A, this report shall also include the following: location and operational condition of all leachate and groundwater monitoring wells; and groundwater and leachate contours for each

monitoring event. Additionally, the Dischargers shall submit semi-annual monitoring reports, to be submitted no later than **October 30** and **April 30** of each year; the April 30 semi-annual report may be combined with the annual report. The first semi-annual monitoring report shall be due following the issuance of a Revised Discharge Monitoring Program. The Revised Discharge Monitoring Program will be issued following review of the Detection Monitoring Plan and Monitoring Well Evaluation Report described in Provision 7.

REPORT DUE DATES:

ANNUAL REPORT– APRIL 30 (EACH YEAR)
SEMI-ANNUAL REPORTS – OCTOBER 31 AND APRIL 30 (EACH YEAR)

4. The Dischargers shall submit a letter report to the Board, acceptable to the Executive Officer, detailing the repair and maintenance activities that need to be completed prior to the commencement of the next rainy season (prior to October 15th of each year). This letter report shall also include a schedule for repair and maintenance activities, and a cost analysis detailing the anticipated expense for all repairs, maintenance and monitoring during the upcoming 12 months. Repair and maintenance estimates shall be based on rainy season inspections conducted throughout the winter as required in the Discharge Monitoring Plan. The report shall also contain a demonstration of the adequacy of the funds needed for the site repair and maintenance.

REPORT DUE DATE: JULY 31 OF EACH YEAR.

5. The Dischargers shall submit an **Emergency Response Contingency Plan**, acceptable to the Executive Officer, intended to stop and contain the migration of pollutants to receiving waters as the result of earthquakes, excessive rainfall, tidal action, or other significant events. The contingency plan shall describe the containment features, and groundwater monitoring and leachate monitoring facilities potentially impacted by such events. The plan shall also include methods of containment and cleanup of waste exposed or displaced at the site. Immediately after an event causing damage to the landfill structures, the corrective action plan shall be implemented and the Dischargers shall give immediate notification to the Regional Board as well as the Local Enforcement Agency (LEA) of any damage, including corrective actions and cleanup activities, and the environmental impacts of such. The plan shall also include a demonstration of the adequacy of the funds needed for the site contingency actions.

PLAN DUE DATE: October 31, 2001

6. The Dischargers shall submit a detailed **Post Earthquake Inspection and Corrective Action Plan** acceptable to the Executive officer to be implemented in the event of any earthquake generating ground shaking of Richter Magnitude 7 or greater at or within 60 miles of the landfill. The report shall describe the containment features, and groundwater monitoring and leachate control facilities potentially impacted by the static and seismic

deformations of the landfill. The plan shall provide for reporting results of the post earthquake inspection to the Board within 72 hours of the occurrence of the earthquake. Immediately after an earthquake event causing damage to the landfill structures, the corrective action plan shall be implemented and this Board shall be notified of any damage.

REPORT DUE DATE: October 31, 2001

7. The Dischargers shall submit a **Detection Monitoring Plan and Monitoring Well Evaluation Report**, acceptable to the Executive Officer, which shall include a description of each well and contain but not be limited to the following:

    1. The type of monitoring well (leachate or groundwater);
    2. The hydrological zone monitored (shallow or deep);
    3. Location with respect to groundwater flow direction (up-gradient, down-gradient, cross-gradient, interior);
    4. Depth, screened interval, casing material, diameter, survey coordinates, and top of casing elevation with respect to mean sea level;
    5. Well location map;
    6. Identification of well pairs that have the potential to monitor vertical gradient; and,
    7. An evaluation of each monitoring well's integrity.

    In addition to the above requirements, all data for wells that contain hydrological information such as hydraulic conductivity, porosity, storativity, and transmissivity shall be included in the report. The report shall propose a Detection Monitoring Plan and present recommendations for the removal and/or replacement of wells found to be in poor working order and for the installation of new wells where data gaps are found to exist.

    REPORT DUE DATE: July 31, 2001

8. For all new development within the landfill, the Dischargers shall assure that:

    - A cap that is in compliance with the intent of Title 27 shall be placed within the entire development area and shall consist of no less than 2 feet of a foundation layer overlain by at least 1 foot of compacted clay liner, with a hydraulic conductivity of 10^{-6} cm/s or less, or alternative barrier layer design, which provides a corresponding low through-flow rate throughout the post-closure maintenance period. A minimum of 1-foot thick erosion resistant layer shall be installed on top of the clay liner, or equivalent barrier layer. The Regional Board must approve all proposed alternative barrier layers prior to their subsequent installation;

    - A **Cap QA/QC Report** shall be submitted **30 days** following the completion of any developing parcels cap reconstruction activities.

The report shall verify that the installed cap meets the requirements of this provision;

- Reconstructed clay caps that are neither irrigated nor paved shall be developed with a sufficient erosion resistant layer and/or engineering controls designed to maintain clay cap hydration;

- The cap integrity shall be maintained during and after construction;

- Any penetrations of the cap, such as from piles, utility pipes, foundations, plants, etc., shall be adequately sealed to prevent infiltration of water;

- The cap shall be graded with a slope of at least 2% to promote run off of storm and irrigated water;

- All irrigated portions of the landfill shall contain a sub-drain installed beneath the vegetative layer of the cap;

- Stormwater run-on and run-off shall be adequately controlled to prevent excessive erosion and damage to the cap. Any applied irrigation water shall likewise be controlled;

- All constructed buildings and utilities shall be built to accommodate the maximum anticipated settlement without structural damage; and

- New construction shall not promote additional standing water on top of the landfill with the exception of properly approved water features. All constructed water features shall contain a minimum of the following:

    - an impermeable layer, in addition to the cap barrier layer, to isolate ponded water from buried refuse; and
    - a sub-drain system designed to remove potential water leaks from the cap and the site.

  Plans for water features and sub-drains shall be submitted to the Regional Board for approval, prior to their construction.

9. All undeveloped (open space), non-irrigated, land shall contain a cap composed of at least 2 feet clean fill material with a graded slope of 2%.

10. The Dischargers are required to monitor leachate levels over time and implement a **Leachate Management Plan**, acceptable to the Executive Officer, to contain leachate within the waste management unit. Upon the detection of leachate buildup within the

waste unit, the Dischargers shall submit a schedule acceptable to the Executive Officer, to install a leachate collection, extraction, and disposal system.

REPORT DUE DATE: November 30, 2001

11. The Dischargers shall prepare and submit a **Development Proposal**, acceptable to the Executive Officer, for each individual development proposed for the landfill.

REPORT DUE DATE: 60 days prior to commencement of construction

12. The Dischargers shall propose appropriate water quality criteria, acceptable to the Executive Officer, based on ecological protection of salt water where leachate is in contact with the Bay and no dilution is considered. If there are impacts to other beneficial uses, appropriate water quality criteria must be established.

REPORT DUE DATE: October 31, 2001

13. The Dischargers shall file with the Regional Board **Discharge Monitoring Reports** performed according to any Discharge Monitoring Program issued by the Executive Officer.

14. The Dischargers shall immediately notify the Board of any flooding, equipment failure, slope failure, or other change in site conditions that could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.

REPORT DUE DATE: Immediately following Changes in Site Conditions

15. The Dischargers shall submit a **Water Quality Sampling and Analysis Plan** (SAP), acceptable to the Executive Officer, which gives a complete and detailed description of the physical process of obtaining field information, measurements, and water quality samples. The SAP should be usable as a stand-alone document and a copy of the current SAP must be available to each member of the sampling team. The SAP must contain sufficient detail for a sampler with limited experience to understand and follow to insure that sampling will be conducted in the same manner by different samplers.

REPORT DUE DATE: June 30, 2001

16. The Dischargers shall submit a work plan, acceptable to the Executive Officer, for the mitigation and long-term containment of the southern perimeter leachate seeps (Guadalupe Lagoon).

REPORT DUE DATE: July 31, 2001

17. The Dischargers shall submit a work plan, acceptable to the Executive Officer, for the mitigation of the central drainage canal.

REPORT DUE DATE : October 31, 2001

18. The Dischargers shall prepare, implement, and submit a **Storm Water Pollution Prevention Plan** for their associated properties in accordance with requirements specified in State Water Resources Control Board General Permit for Storm Water Discharges Associated with Industrial Activities (NPDES Permit No. CAS000001).

COMPLIANCE DUE DATE: August 31, 2001

19. For each proposed development, the Dischargers shall prepare, implement, and submit a **Storm Water Pollution Prevention Plan** in accordance with requirements specified in State Water Resources Control Board General Permit for Storm Water Discharges Associated with Construction Activities (NPDES Permit No. CAS000002).

COMPLIANCE DUE DATE: 45 days prior to commencement of construction

20. The Dischargers shall submit a **Well Installation Report**, acceptable to the Executive Officer, that provides well construction details, geologic boring logs, and well development logs for all new wells installed as part of the attached Discharge Monitoring Program (Attachment A).

COMPLIANCE DUE DATE: 45 days following completion of well installation activities

21. The Dischargers shall maintain a copy of these waste discharge requirements and these requirements shall be available to operating personnel at the facility at all times. (CWC Section 13263).

22. This Board considers the property owners to have continuing responsibility for correcting any problems that arise in the future as a result of the waste discharged or related operations.

23. In the event that the Dischargers-owned property adjacent to the landfill is developed into residential dwellings, the Dischargers will notify perspective home purchasers of the presence of the landfill.

24. The Dischargers shall permit the Regional Board or its authorized representative, upon presentation of credentials:

    a. Immediate entry upon the premises on which wastes are located or in which any required records are kept.
    b. Access to copy any records required to be kept under the terms and conditions of this order.

c. Inspection of any treatment equipment, monitoring equipment, or monitoring methods required by this order or by any other California State Agency.
d. Sampling of any discharge or groundwater governed by this Order.

25. The Dischargers shall notify the succeeding owners or operators of this Order by letter in the event of any change in control, ownership of land, or waste discharge facilities presently owned or controlled by the Dischargers. The Dischargers must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new discharger. The notice must include a written agreement between the existing and new dischargers containing a specific date for the transfer of this order's responsibility and coverage between the current Dischargers and the new dischargers. This agreement shall include an acknowledgment that the existing Dischargers are liable for violations up to the transfer date and that the new dischargers are liable from the transfer date on. (CWC Sections 13267 and 13263). The request must contain the requesting entity's full legal name, and the address and telephone number of the persons responsible for contact with the Board. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code.

26. This Order is subject to Board review and updating, as necessary, to comply with changing State and Federal laws, regulations, policies, or guidelines; changes in the Board's Basin Plan; or changes in the discharge characteristics (CWC Section 13263).

27. When the Dischargers becomes aware that they failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information (CWC Sections 13260 and 13267).

28. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the Dischargers from his liability under Federal, State or local laws, nor do they create a vested right for the Dischargers to continue the waste discharge [CWC Section 13263(g)].

29. Provisions of these waste discharge requirements are severable. If any provision of these requirements is found invalid, the remainder of these requirements shall not be affected.

30. The Dischargers shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Dischargers to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this order [CWC Section 13263(f)].

31. Except for a discharge that is in compliance with these waste discharge requirements, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the office of Emergency Services of the discharge in accordance with the spill reporting provision of the state toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the State Board or the appropriate Regional Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of Section 13271 of the Water Code unless the discharger is in violation of a prohibition in the applicable water Quality Control Plan [CWC Section 13271(a)].

32. The Dischargers shall report any noncompliance that may endanger health or the environment. Any such information shall be provided orally to the Executive officer within 24 hours from the time the Dischargers become aware of the circumstances. A written submission shall also be provided within five days of the time the Dischargers become aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours [CWC Sections 13263 and 13267].

33. All monitoring instruments and devices used by the Dischargers to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

34. Unless otherwise permitted by the Regional Board Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. The Executive Officer may allow use of an uncertified laboratory under exceptional circumstances, such as when the closest laboratory to the monitoring location is outside the State boundaries and therefore not subject to certification. All analyses shall be required to be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR, Part 1360) promulgated by the U.S. Environmental Protection Agency (CCR Title 23, Section 2230).

35. This Board's Resolution 58-278 and Cleanup and Abatement Order No. 94-134 are hereby rescinded.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on April 18, 2001.

Loretta K. Barsamian
Executive Officer

Figures: Figure 1 - Site Location Map
Figure 2 - Landfill Map
Figure 3 - Parcel Location Map

Table: Table 1 - Parcel Ownership Information

Attachment: Attachment A - Discharge Monitoring Program

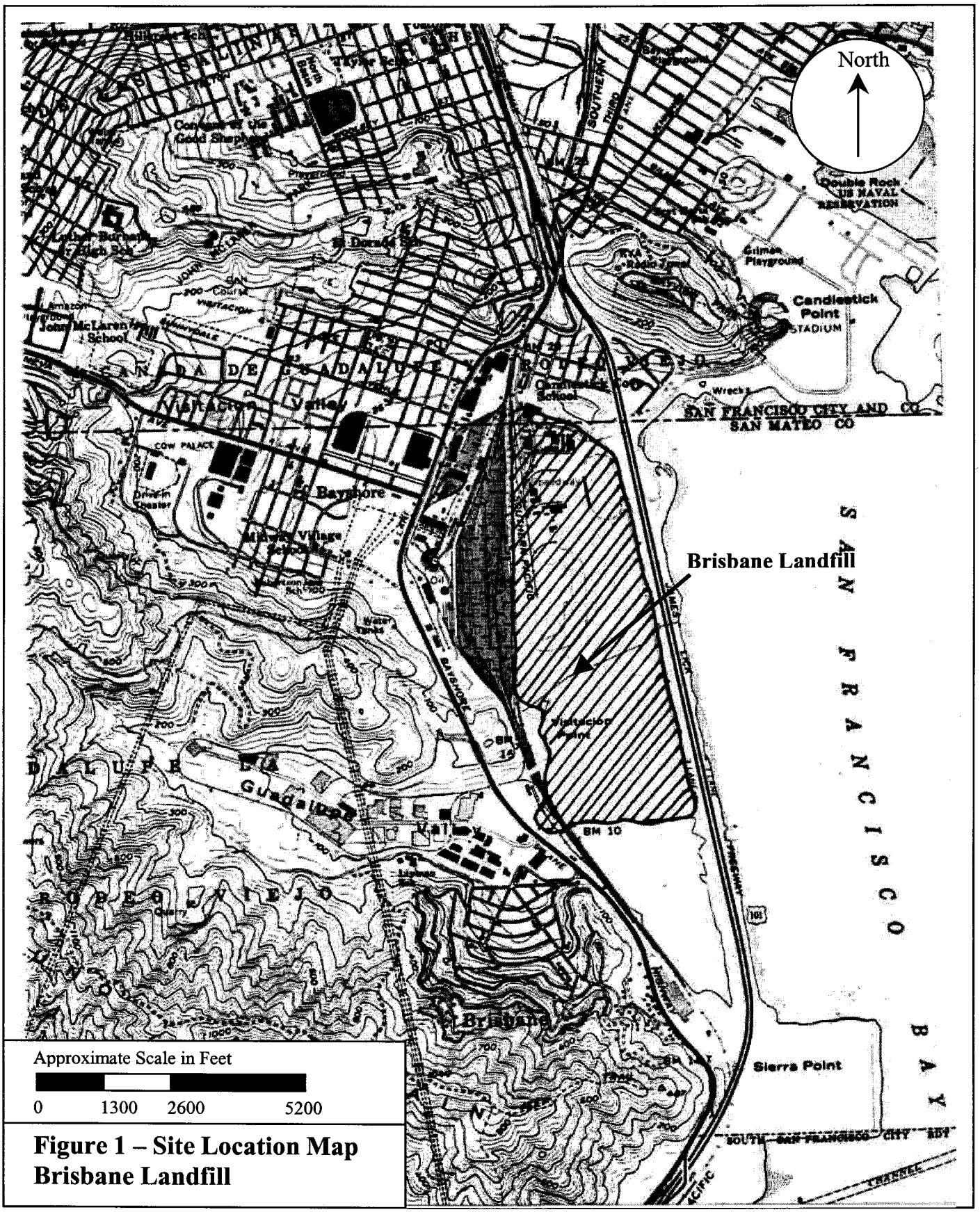

Figure 1 – Site Location Map
Brisbane Landfill

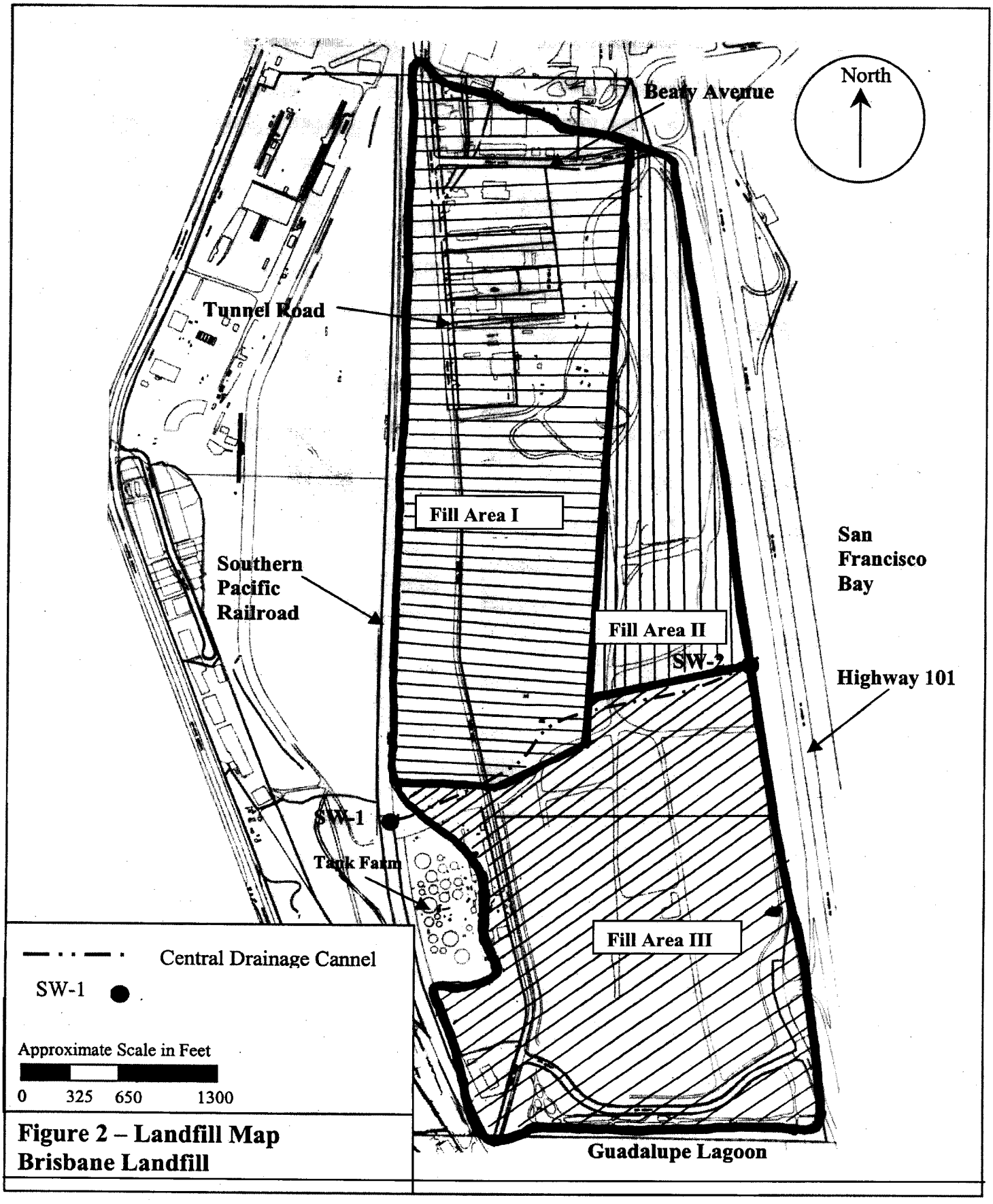

Figure 2 – Landfill Map
Brisbane Landfill

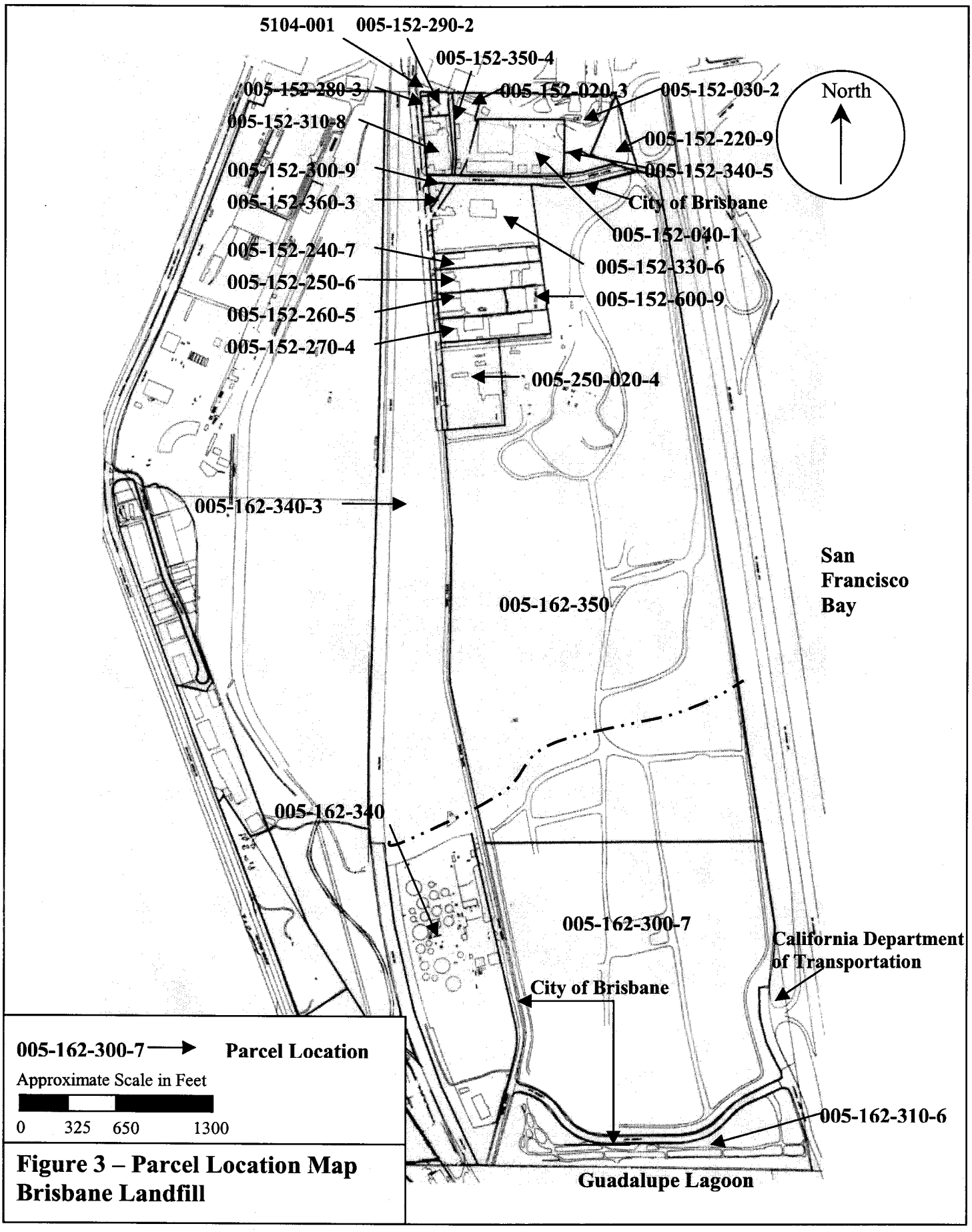

Figure 3 – Parcel Location Map
Brisbane Landfill

Table 1 - Parcel Ownership Information

Assessor's Parcel Number(s)	Owner's Name
005-152-020-3	Sanitary Fill Company
005-152-030-2	Sanitary Fill Company
005-152-290-2	Sanitary Fill Company
005-152-280-3	Sanitary Fill Company
005-152-330-6	Sanitary Fill Company
005-152-340-5	Sanitary Fill Company
005-152-040-1	Sunset Properties, Inc.
005-152-220-9	Sunset Scavenger Company & Macor, Inc.
5104-001	Macor, Inc.
005-152-310-8	Fewer, Robert E., and Dorthy D., TRS
005-152-300-9	Papenhause, Bruce R. and SM TRS & Kurt Papenhause
005-152-350-4	Papenhause, Bruce R. and SM TRS & Kurt Papenhause
005-152-360-3	Papenhause, Bruce R. and SM TRS & Kurt Papenhause
005-152-270-4	Van Arsdale-Harris Lumber Co.
005-250-020-4	Brisbane Properties, LLC, and Douglas H. and Diane A. Galten
005-162-350	Oyster Point Properties, Inc. (Sunquest Properties, Inc.)
005-162-300-7	Oyster Point Properties, Inc. (Sunquest Properties, Inc.)
005-162-310-6	Oyster Point Properties, Inc. (Sunquest Properties, Inc.)
005-162-340-3	Oyster Point Properties, Inc. (Sunquest Properties, Inc.)
005-152-260-5	Tuntex (USA), Inc.
005-152-250-6	Tuntex (USA), Inc.
005-152-600-9	Tuntex (USA), Inc.
005-152-240-7	Tuntex (USA), Inc.
005-162-340	Tuntex (USA), Inc.
	City of Brisbane
	California Department of Transportation

ATTACHMENT A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

DISCHARGE MONITORING PROGRAM

FOR

BRISBANE LANDFILL
CITY OF BRISBANE, SAN MATEO COUNTY

ORDER NO. 01-041

CONSISTS OF

PART A

AND

PART B

PART A

A. GENERAL

Reporting responsibilities of waste discharger are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16. This Discharge Monitoring Program is issued in accordance with Title 27.

The principal purposes of a discharge monitoring program are: (1) to document compliance with waste discharge requirements and prohibitions established by the Board, (2) to facilitate self-policing by the waste Dischargers in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of standards of performance, and toxicity standards, (4) to assist the Dischargers in complying with the requirements of Title 27.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the most recent version of EPA Standard Methods and in accordance with an approved sampling and analysis plan.

Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. A grab sample is a discrete sample collected at any time.

2. Receiving waters refers to any surface water, which actually or potentially receives surface or groundwaters, which pass over, through, or under waste materials or contaminated soils. In this case the groundwater beneath and adjacent to the landfill areas, the surface runoff from the site, the Guadalupe Lagoon, and the San Francisco Bay are considered receiving waters.

3. Standard observations refer to:

a. Receiving Waters:

1) Floating and suspended materials of waste origin: presence or absence, source, and size of affected area;
2) Discoloration and turbidity: description of color, source, and size of affected area;
3) Evidence of odors, presence or absence, characterization, source, and distance of travel from source;
4) Evidence of beneficial use: presence of water associated wildlife;
5) Flow rate; and
6) Weather conditions: wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.

b. Perimeter of the waste management unit:

1) Evidence of liquid leaving or entering the waste management unit, estimated size of affected area and flow rate (show affected area on map);
2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source; and
3) Evidence of erosion and/or daylighted refuse.

c. The waste management unit:

1) Evidence of ponded water at any point on the waste management facility;
2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source;
3) Evidence of erosion, slope or ground movement, and/or daylighted refuse;
4) Adequacy of access road;
5) Condition of site drains, silt basin capacity; and
6) Standard Analysis and measurements (listed in the attached Table A).

D. SAMPLING, ANALYSIS, AND OBSERVATIONS

The Dischargers are required to perform sampling, analyses, and observations in the following media:

1. Storm drain discharges per Section 20415; and,
2. Groundwater and leachate per Section 20415.

E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the Dischargers or laboratory, and shall be retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

1. Identity of sample and sample station number;

2. Date and time of sampling;

3. Date and time that analyses are started and completed, and name of the personnel performing the analyses;

4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;

5. Calculation of results; and

6. Results of analyses, and detection limits for each analysis.

F. REPORTS TO BE FILED WITH THE BOARD

1. Written detection monitoring reports shall be filed by **October 30** and **April 30** of each year. In addition an annual report shall be filed by **April 30** of each year. The reports shall be comprised of the following:

   a. Letter of Transmittal:

      A letter transmitting the essential points in each report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations. If the Dischargers have previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

b. Each monitoring report shall include a compliance evaluation summary. The summary shall contain:

1) A graphic description of the velocity and direction of groundwater flow under/around the waste management unit, based upon the past and present water level elevations and pertinent visual observations.

2) The method and time of water level measurement, the type of pump used for purging, pump placement in the well; method of purging, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity during purging, calibration of the field equipment, results of the pH, temperature conductivity and turbidity testing, well recovery time, and method of disposing of the purge water.

3) Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations.

c. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.

d. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board.

1) The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review and approved by the Executive Officer prior to use.

2) In addition to the results of the analyses, laboratory quality assurance/quality control (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information shall include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than 80%; the results of equipment and method blanks; the results

of spiked and surrogate samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.

e. An evaluation of the effectiveness of the leachate monitoring facilities, which includes an evaluation of leachate buildup within the disposal units.

f. A summary and certification of completion of all standard observations for the waste management unit, the perimeter of the waste management unit, and the receiving waters.

2. CONTINGENCY REPORTING

A report shall be made by telephone of any **seepage** from the disposal area immediately after it is discovered. A written report shall be filed with the Board within **five days** thereafter. This report shall contain the following information:

1) a map showing the location(s) of discharge if any;
2) approximate flow rate;
3) nature of effects, i.e., all pertinent observations and analyses; and
4) corrective measures underway, proposed, or as specified in the Waste Discharge Requirements.

3. REPORTING

By **April 30** of each year the Dischargers shall submit an annual report to the Board covering the previous calendar year. The annual report may incorporate the second semi-annual report of the previous year. The annual report shall contain:

a. Tabular and graphical summaries of the monitoring data obtained during the previous year; the report should be accompanied by a computer data disk, tabulating the year's data in Microsoft Excel.

b. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements.

c. A written summary of the groundwater analyses indicating any change in the quality of the groundwater.

d. An evaluation of the effectiveness of the leachate monitoring/control facilities, which includes an evaluation of leachate buildup within the disposal units.

4. WELL LOGS

A boring log and a monitoring well construction log shall be submitted for each new sampling well established for this monitoring program, as well as a report of inspection or certification that each well has been constructed in accordance with the construction standards of the Department of Water Resources. These shall be submitted within 45 days after well installation.

Part B

1. DESCRIPTION OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS

A. ON-SITE OBSERVATIONS – Observe Quarterly, Report Semi-annually

STATION	DESCRIPTION	OBSERVATIONS	FREQUENCY
Standard Observations:			
A-1 to A-'n'	Located on the area as deli-neated by a 500 foot grid network.	Standard observations for the waste management unit as defined in Part A, Section C	Quarterly
Interior Seeps:			
L-1 thru L-'n'	At each point of discharge. Include a map indicating locations of discharge(s)	All Parameters as outlined in Table A (perform analysis once per seep)	Weekly until remedial action is taken and seepage ceases.
Perimeter Observations:			
P-1 thru P-'n'	Located at equidistant intervals not exceeding 1000 feet around the perimeter of the waste management unit.	Standard observations for the waste management unit perimeter as defined in Part A, Section C	Quarterly
Perimeter Seeps:			
S-1 thru S-'n'	At any point(s) at which seepage is found occurring from the disposal area. Include a map indicating locations of discharge(s)	All Parameters as outlined in Table A (perform analysis once per seep)	Weekly until remedial action is taken and seepage ceases.

B. SURFACE, GROUNDWATER AND LEACHATE MONITORING -
Report Semi-annually

i. Surface and Stormwater: Surface water shall be monitored as outlined below and in Table A (Attached). These monitoring points are also shown on Figure 2 (Attached). The results of the additional monitoring conducted as part of the General Permit for stormwater discharge shall be submitted as part of the annual report.

Monitoring Points:

Surface Water	Comply with the requirements of the General Industrial Storm Water Runoff Program

ii. Groundwater: Groundwater samples shall be analyzed as outlined below in accordance with Table A (Attached).

Monitoring Points:

Groundwater	Will be established following receipt of the **Monitoring Well Evaluation Report**

iii. Leachate: Leachate samples shall be analyzed as outlined below in accordance with Table A (Attached).

Monitoring Points:

Leachate	Will be established following receipt of the **Monitoring Well Evaluation Report**

C. **FACILITIES MONITORING**

The Dischargers shall inspect all environmental control facilities to ensure proper and safe operation once per quarter and report semi-annually.

D. Reports shall be due on the following schedule:

First semi-annual report:	**October 30 of each year**
Second semi-annual Report:	**April 30 of each year**
Annual Report:	**Combined with the second semi-annual report, due April 30 of each year**

I, Loretta K. Barsamian, Executive Officer, hereby certify that the foregoing Discharge Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. 01-041.

2. Is effective on the date shown below.

3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer.

Loretta K. Barsamian
Executive Officer

Date Ordered: April 18, 2001

Attachment: Table A – Discharge Monitoring Plan, List of Analytical Parameters, Surface, Stormwater, Leachate and Groundwater

Table A - Discharge Monitoring Plan, List of Analytical Parameters, Surface, Stormwater, Leachate and Groundwater

Field/Inorganic Parameters	Method[1]	Frequency
pH	Field	Semi-Annual
Electrical conductivity	Field	Semi-Annual
Leachate Elevation	Field	Quarterly
Groundwater Elevation	Field	Quarterly
Sulfate	300.0	Semi-Annual
Total Dissolved Solids	160.1	Semi-Annual
Ammonia (un-ionized)	350.1	Semi-Annual
Total organic carbon	415.1	Semi-Annual
Nitrate	9200	Semi-Annual

Organics/Pesticides/PCBs	Method[1]	Frequency
Volatile Organic Compounds (including MTBE)	8260	Semi-Annual[2]
Semi-volatile Organic Compounds	8270	Semi-Annual[3]
Organochlorine Pesticides & PCBs	8080	Semi-Annual[3]

Metals	Method[1]	Frequency
Arsenic	7060	Semi-Annual
Barium	6010	Semi-Annual
Lead	7421	Semi-Annual
Nickel	6010	Semi-Annual
Selenium	7740	Semi-Annual

Notes:

1 Test methods per Methods for Chemical Analysis of Water and Waste, USEPA 600/4/79/029, revised March 1983, or Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods, USEPA SW-846, 3rd edition, November 1986 and revisions. The Board staff can consider alternative EPA and/or Standard Methods, with comparable MDLs and PQLs, for use at the Brisbane Landfill.

2. Analysis of groundwater and leachate shall be conducted during the October 2001 sampling event. Any identified impacted monitoring wells shall be analyzed semi-annually, thereafter. All other monitoring wells shall be monitored, annually.

3. Analysis of groundwater and leachate shall be conducted during the October 2001 sampling event. Any identified impacted monitoring wells shall be analyzed semi-annually, thereafter. All other monitoring wells shall be monitored once every 5 years.